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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,592	10/05/2005	David Anthony Barrow	930058-2004	6831
7590 Ronald R Santucci Frommer Lawrence & Haug 745 Fifth Avenue New York, NY 10151				
03/28/2008				
EXAMINER				
CHAUDRY, ATIF H				
ART UNIT		PAPER NUMBER		
4156				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/534,592

Applicant(s)

BARROW ET AL

Examiner

ATIF H. CHAUDRY

Art Unit

4156

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 21-42 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

- a. Group I, species disclosed in Fig 1A-1E, 8A-8C.
- b. Group II, species disclosed in Fig 2A.
- c. Group III, species disclosed in Fig 3A.
- d. Group IV, species disclosed in Fig 4.
- e. Group V, species disclosed in Fig 5A-5e,6.
- f. Group VI, species disclosed in Fig 7.
- g. Group VII, species disclosed in Fig 9A.
- h. Group VIII, species disclosed in Fig 9B.
- i. Group IX, species disclosed in Fig 9C.
- j. Group X, species disclosed in Fig 10A-B.
- k. Group XI, species disclosed in Fig 11A-B.
- l. Group XII, species disclosed in Fig 12.
- m. Group XIII, species disclosed in Fig 13.
- n. Group XIV, species disclosed in Fig 14.
- o. Group XV, species disclosed in Fig 15a.
- p. Group XVI, species disclosed in Fig 15b.

- q. Group XVII, species disclosed in Fig 15c.
- r. Group XVIII, species disclosed in Fig 16A-B.
- s. Group XIX, species disclosed in Fig 17.
- t. Group XX, species disclosed in Fig 18.
- u. Group XXI, species disclosed in Fig 19.
- v. Group XXII, species disclosed in Fig 20A-D.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

2. The claims are deemed to correspond to the species listed above in the following manner:

- | | |
|-------------|-------------------|
| a. Claim 23 | Group VII. |
| b. Claim 24 | Group VIII and IX |
| c. Claim 25 | Group XIV |
| d. Claim 26 | Group XI |

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- | | | |
|----|----------|---------------------------|
| e. | Claim 27 | Group XII |
| f. | Claim 29 | Group XVI |
| g. | Claim 30 | Group XIII, XV, XVI, XVII |
| h. | Claim 37 | Group XVI |
| i. | Claim 38 | Group XVI |
| j. | Claim 39 | Group XV |
| k. | Claim 42 | Group I, III, IV and V |

The following claim(s) are generic: 21,22,28,31,32,33,34,35,36,40,41.

3. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons:

4.

- | | | |
|----|-------------|---|
| a. | Group I, | two substrate combing into one in an encasement with openings in encasement |
| b. | Group II | No encasement, opening in substrate |
| c. | Group III, | interlocking fins, and through holes. |
| d. | Group IV | multiple substrate layers |
| e. | Group V, | daughterboards |
| f. | Group VI | multiple outlets from single path |
| g. | Group VII, | segmented by surface change energy |
| h. | Group VIII, | .segmented by photo-responsive surface |
| i. | Group IX, | segmented by electrical energy |

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- j. Group X, electrokinetic disruption
- k. Group XI, third fluid.
- l. Group XII, segment morphology change by further constriction.
- m. Group XIII, splitting the flow.
- n. Group XIV, tributary duct.
- o. Group XV, spherical segment.
- p. Group XVI, subject to UV radiation.
- q. Group XVII, reagent exposure.
- r. Group XVIII, aqueous –non-aqueous mixing.
- s. Group XIX, permeable material.
- t. Group XX, rejoining two ducts.
- u. Group XXI, Three parallel streams.
- v. Group XXII, pressure sensor.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Atif H. Chaudry whose telephone number is 571-270-3768. The examiner can normally be reached on Mon-Fri, Alternate Friday off 9-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Isabella can be reached on 571-272-4749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ATIF CHAUDRY
PATENT EXAMINER
AHC

3/27/2008

/Dmitry Suhol/
Primary Examiner, Art Unit 3725